

1. An apparatus for stabilizing a pair of parallel coaxial lines within a tower, with an upper portion of each coaxial line being suspended from the tower, and a lower end of the coaxial lines free to move vertically relative to the tower, the apparatus comprising:

5 an expandable element disposed along a first portion of one coaxial line;
and

a frame rigidly tying together the two coaxial lines at a second portion of each of the coaxial lines below the expandable element.

2. The apparatus according to claim 1, wherein the second portions
10 of the coaxial lines tied together each comprise an elbow.

3. The apparatus according to claim 1, wherein the frame ties together the second portions of the coaxial lines so that they are retained in a common horizontal plane.

4. The apparatus according to claim 2, wherein the frame ties
15 together the elbows so that they are retained in a common horizontal plane.

5. An apparatus according to claim 1, wherein the frame includes a cross member that is strapped to each of the second portions of the lines.

6. An apparatus according to claim 2, wherein the frame includes a cross member that is strapped to each of the elbows.

7. An apparatus according to claim 1, wherein the frame further includes a stabilization assembly that surrounds the first coaxial line at a position
5 above the flexible section and permits vertical travel of the coaxial line relative to the frame at the surrounded position, and inhibits lateral movement of the coaxial line at that position relative to the frame, thereby permitting the expandable element to expand and contract vertically, and inhibiting axial misalignment of the line above and below the flexible section.

10 8. An apparatus according to claim 1, further comprising spring hangers each supporting one coaxial line from the tower, wherein the spring hangers permit vertical travel of the coaxial line relative to the tower, and inhibit lateral movement of the coaxial line relative to the tower.

9. An apparatus according to claim 1, wherein the expandable
15 element is a pair of telescoping tubes.

10. An apparatus according to claim 1, wherein the expandable element is corrugated.

11. An apparatus for stabilizing a pair of parallel coaxial lines for an antenna having a tower, with an upper portion of each coaxial line being suspended from the tower, and a lower end of the coaxial lines free to move vertically relative to the tower, the apparatus comprising:

5 expansion means disposed along a first portion of one coaxial line; and
tying means for rigidly tying together the two coaxial lines at a second portion of each of the lines below the expansion means.

12. The apparatus according to claim 11, wherein the second portions of the coaxial lines tied together each comprise an elbow.

10 13. The apparatus according to claim 11, wherein the tying means ties together the second portions of the coaxial lines so that they are retained in a common horizontal plane.

14. The apparatus according to claim 12, wherein the tying means ties together the elbows so that they are retained in a common horizontal plane.

15 15. An apparatus according to claim 11, wherein the tying means includes a cross member that is strapped to each of the second portions of the lines.

16. An apparatus according to claim 12, wherein the tying means includes a cross member that is strapped to each of the elbows.

17. An apparatus according to claim 11, wherein the tying means further includes a stabilization assembly that surrounds the first coaxial line at a position above the expansion means and permits vertical travel of the coaxial line relative to the tying means at the surrounded position, but inhibits lateral movement of the coaxial line at that position relative to the tying means, thereby permitting the expansion means to expand and contract vertically, while inhibiting axial misalignment of the line above and below the expansion means.

18. An apparatus according to claim 11, further comprising spring hangers each supporting one coaxial line from the tower, wherein the spring hangers permit vertical travel of the coaxial line relative to the tower, but inhibit lateral movement of the coaxial line relative to the tower.

19. An apparatus according to claim 11, wherein the expansion means comprises a flexible section.

20. A method for stabilizing a pair of parallel coaxial lines for an antenna having a tower, with an upper portion of each coaxial line being

suspended from the tower, and a lower end of the coaxial lines free to move vertically relative to the tower, the method comprising the steps of:

providing an expandable element at a location between the upper portion and the lower end of the coaxial line; and

5 holding the lower ends of the coaxial lines together at a relative horizontal height with each other.

21. A method according to claim 20, further comprising the steps of permitting the lower ends to move vertically relative to the tower, while simultaneously holding the lower ends at the same height as each other.

10 22. A method according to claim 20, wherein the portions of the coaxial lines tied together each comprise an elbow.